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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CORRIELUS, JEAN M

ART UNIT PAPER NUMBER

2162

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,457

Applicant(s)

MILLER ET AL.

Examiner

Jean M. Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/6/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed on September 6, 2005, in which claims 1-13 are presented for further examination.

Response to Arguments

2. Applicant's arguments filed September 6, 2005 have been fully considered but they are not persuasive. (See examiner's remark section).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lazarus et al., (hereinafter "Lazarus") US Patent no. 6,430,539 and Zhang, article entitled "Classification trees".

As to claims 1 and 4, Lazarus discloses "behavioral data for a set of consumer, wherein consumer in each cluster of said plurality of cluster have substantially similar behavioral characteristics to each other and different behavioral characteristics from the consumers in all other clusters of said plurality of cluster" (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12), "demographic data

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for a set of consumer, wherein consumer in each cluster of said plurality of cluster have substantially similar demographic characteristics” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12; col.12, lines 57-62). Lazarus provides a solution that defined cluster based jointly on behavior and demographics (col.39, liners 44-52; col.9, line 55-col.10, line 28; col.5, lines 26-65). Lazarus does not explicitly disclose the use of generating a plurality of classification tree base on demographics and behavior data. Zhang, on the other hand, discloses the use of creating a classification a plurality of classification tree base on demographics and behavior data (page 181, section 2.2; fig.3; fig.4; fig.5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references. Such a combination would provide Applicant’s admitted prior art the enhanced capability of increasing the accuracy of prediction.

As to claims 2 and 5, Zhang discloses the claimed “wherein said classification trees using Zhang’s methodology” (page 181, section 2.2; fig.3; fig.4; fig.5).

As to claim 3 and 6, Zhang discloses the claimed “wherein said searching using Zhang’s methodology” (page 181, section 2.2; fig.3; fig.4; fig.5).

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As to claim 7, Lazarus discloses the claimed “a profile definitions module for supplying profile definitions to said partitioning module for use in creating classification trees” (see col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12; col.12, lines 57-62; col.11, lines 48-66; col.15, line 64-col.16, lines 7); “a profile data module for supplying profile data to said partitioning module” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12; col.12, lines 57-62; col.11, lines 48-66; col.15, line 64-col.16, lines 7); “a segment definitions module for supplying segment definitions data to said partitioning module” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12, lines 24-28; col.12, lines 57-62); and “a cluster assignments module for storing consumer clusters generated by said partitioning module, wherein said partitioning module generates an optimal classification tree resulting in a plurality of consumer clusters with consumers in each cluster of said plurality of clusters having substantially similar behavioral and demographic characteristics to each other and different behavioral or demographic characteristics from consumers in all other clusters of said plurality of clusters” (col.39, lines 44-52; col.9, line 55-col.10, line 28; col.5, lines 26-65). However, Lazarus does not explicitly create classification trees to define consumer clusters. Zhang, on the other hand, discloses the use of creating a classification a plurality of classification tree base on demographics and behavior data (page 181, section 2.2; fig.3; fig.4; fig.5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references. Such a combination would provide Applicant’s admitted prior art the enhanced capability of increasing the accuracy of prediction.

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As to claim 8, Lazarus discloses the claimed “a summarization module adapted to generate summary data, said summary data being a summarization of data contained in said cluster assignments module” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12, lines 24-28; col.12, lines 57-62); and a summary data module adapted to store said summary data” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12, lines 24-28; col.12, lines 57-62).

As to claim 9, Lazarus discloses the claimed “wherein said profile definitions module comprises a database” (col.10, lines 24-27).

As to claim 10, Lazarus discloses the claimed “wherein said profile data module comprises an electronic file” (col.10, lines 22-24).

As to claim 11, Lazarus discloses the claimed “wherein said segment definitions module comprises a dbase file” (col.13, line 15-col.15, line 22).

As to claim 12, Lazarus discloses the claimed “wherein said cluster assignments module comprises a dbase table” (col.13, line 15-col.15, line 22).

As to claim 13, Zhang discloses the claimed “wherein said partitioning module uses Zhang's methodology to create classification trees” (page 181, section 2.2; fig.3; fig.4; fig.5).

Remark

(A). Applicant asserted that there is no teaching or disclosure of “consumers in each cluster of said plurality of clusters have substantially similar behavioral and demographic characteristic to each other and different behavioral or demographic characteristics from consumers in all other clusters of said plurality of clusters” in Lazarus. The examiner disagrees with the precedent assertion. However, when read and analyzed in the light of the specification, the invention as claimed does not support applicants' assertion. Moreover, the claims do not capture the essence of the invention as argued in applicants' remark pages 10 and 11. The aforementioned assertions, wherein the consumers in each cluster of said plurality of clusters have substantially similar behavioral and demographic characteristic to each other and different behavioral or demographic characteristics from consumers in all other clusters of said plurality of clusters fails to disclose by Lazarus with regard to the invention of claims 1, 4 and 7, was unsupported by objective factual evidence and was not found to be substantial evidentiary value.. It is respectfully submitted that Lazarus discloses substantially the invention as broadly claimed. In particular, Lazarus' system is related to analysis of consumer financial behavior by determining consumer interests based on consumer demographic information. Lazarus discloses the use of creating a class membership function for each consumer, which describes how strongly the consumer is associated with each segment and where the membership function can be weighted based on the spending habits are most similar to the merchants in the cluster, thereby allowing very specific and accurate targeting of promotions (col.4, lines 46-62). Lazarus discloses the use of creating a cluster based on the similarity behavioral and demographic characteristics (col.10, lines 59-64; col.12, lines 1-4). It is clear that, in col.27, lines 33-col.28, line 23, Lazarus creates clusters

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having similar behavioral and demographic characteristics to each other and different behavioral or demographic characteristics from consumers in all other clusters of said plurality of clusters. The Applicants always have the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater* 162 USPQ 541, 550-51 (CCPA 1969). Therefore, Lazarus discloses the invention as claimed.

(B). Applicant asserted that Zhang does not relate to demographic and behavior data and there is no motivation to combine the teachings of Lazarus regarding cluster of merchants. In response to applicant's arguments against the references individually, Applicant is reminded that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Further, in response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Lazarus' system is related to analysis of consumer financial behavior by determining consumer interests based on consumer demographic information. Lazarus discloses the use of creating a class membership function for each consumer, which describes how strongly the consumer is

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associated with each segment and where the membership function can be weighted based on the spending habits are most similar to the merchants in the cluster, thereby allowing very specific and accurate targeting of promotions (col.4, lines 46-62), while Zhang' system is directed to a method to analysis building related occupant complaint syndrome based on a recently collected large database throughout the world in office building, hospitals, and so forth, using basics of the tree based technique. It is clear that Lazarus' system can be modified to use the classification tree methodology disclosed by Zhang. Consequently, the 103 rejection is hereby sustained.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

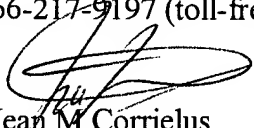
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean M. Corrielus whose telephone number is (571) 272-4032. The examiner can normally be reached on 10 hours shift.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jean M Corrielus
Primary Examiner
Art Unit 2162

November 14, 2005